Current Firmware Revision: 1.09

The following notes provide the revision history and a list of known software issues in the current release for the Extron IPL T Series products. For more information please call your Extron Application Engineer.

Updated:	October 17, 2005	
Extron Products Affected:	IPL T S2	IPL T SFI244
	IPL T S4	IPL T CR48
	IPL T S6	IPL T IRL
	IPL T SF24	
Current Engineering Revision:	ER15957:	IPL T S2, IPL T S4, IPL T S6, IPL T SF24, IPL T SFI244, IPL T CR48, IPL T IRL

TECH NOTES

Updating firmware – Updating units with factory firmware version 1.04 or prior, may result in a corrupted firmware upload. It is highly recommended that all units with factory firmware version 1.04 or prior (units shipped before October 2004) upload a firmware patch (503468v101.s19) before updating the firmware to any future versions. To query the factory firmware version, issue the SIS command *3Q* to the unit. The firmware patch along with the latest firmware and update instructions is available for download on the Extron website Download Center.

Retaining unit settings – Because the memory used by IP Link products is non-volatile flash memory, it can often take some time to write to it. Any changes to the unit's settings such as switch settings, setup parameters, etc., via the front panel, RS-232 or IP communication may take as long as 2 minutes to complete the firmware flash process. To minimize the risk of losing the unit's settings, Extron recommends that the IP Link box not be disconnected until the firmware flash process has completed.

KNOWN FIRMWARE ISSUES

The following is a list of known issues with Firmware Version **1.09** used on the IPL T series products:

Upgrade patch required - Some products previously loaded with version 1.04 or prior may require a firmware patch be loaded prior to upgrading to version 1.09. Instructions and the appropriate patch file are included with the firmware download for version 1.09. If the unit was previously patched to firmware version 1.06 or 1.08 then uploading the 1.09 firmware will not require re-patching the product.

FIRMWARE RELEASE HISTORY

Released Version: 1.09
Affects: **Engineering Revision:** ER15957
Firmware Revision: 1.08 or earlier
Date(s): Units shipped prior to October 7, 2005

The following is a list of changes and fixes in this release.

- **Fixed IPL T IRL ready light** - The green "ready" LED on the front panel now functions when learning IR codes.
- **Fixed ESC SIS command problem** – ESC SIS commands that happened to end on certain buffer boundaries would be ignored. This problem has been corrected.
- **Fixed port settings after mode 5 reset** – In some cases, a mode 5 reset would cause http and telnet ports to be mapped to 65535. Additionally, all serial ports would be set to configuration mode and would report verbose responses. This has been corrected.
- **Fixed DHCP renewal –** DHCPREQUEST upon IP renewal will no longer produce a DHCPNAK response from the DHCP server.
- **Added verbose responses for IR commands** - In previous firmware versions, IR send commands would not generate a response in any verbose sessions except for the session that issued the command. Now any session logged into the IPLink unit in verbose mode will see the response to IR send commands regardless of the source.
- **Added E31 error** – Issuing the 'break port pass through' command (esc1*0CD|) on a port that had no pass through settings used to generate an E13 because the command could not be done again. The same scenario now produces an E31, indicating that the command is valid, but was not executed again because the port is already in that state.
- **Added port remapping limitations** – Users can now no longer set http and telnet ports to values less than 1024 to prevent conflicts with well known ports. Exceptions are 23 for telnet and 80 for http.
- **Added file extension support** – Files with bmp, gif, jpg, jpeg, png, pdf, cab, ocx, dll, swf, and fla extensions now have proper mime types in the http headers. Files with htm, html, js, xml, and eml will be parsed for server side includes.
- **Added ARP on reboot and IP change –** Upon reboot or change of IP address, the IPLink unit will issue an ARP broadcast to update ARP tables in network hardware. The result is that replacing a box with one of the same IP address will no longer fail to connect across routers and switches.
- **Added part number to the copyright message –** The part number is now included into the copyright message that appears when the user telnets to the unit.
- **Added support for 8Mb boards** – The following products are now available with 8MB of flash memory with the corresponding new part numbers: IPL T S2 (60-544-81), IPL T S4 (60-544-83), IPL T S6 (60-544-84), IPL T SFI244 (60-544-86).

FIRMWARE RELEASE HISTORY (Cont'd)

Released Version: 1.08

Affects: **Engineering Revision:** prior to E15302
Firmware Revision: 1.06 or earlier
Date(s): Units shipped prior to March 9, 2005

The following is a list of changes and fixes in this release.

- **Fixed Ethernet re-transmit problem** – Under certain conditions when the product is accessed across a proxy server or VPN connection, the product could enter a mode of constant re-transmission of that data previously sent. This caused excessive network traffic.

- **Fixed SIS commands**
  - Esc CF - no longer allows hardware flow control for RS-422 and RS-485
  - Esc CY - clears hardware flow control if set while changing to 422 or 485
  - Esc RS – timeouts were not working correctly
  - Esc CZ – was not storing GMT offsets with negative values
  - Q – responses from web requests incorrectly contained a CR/LF terminator

- **Fixed clock**
  - Daylight saving time calculation has not corrected during a leap year
  - Esc CT - incorrectly computed the date with September having 31 days.

- **Fixed DHCP** – After a period of time DHCP could stop working if other devices on the network were asking for an address from a server.

- **Fixed Direct Access** – When set to zero (0=disabled) not all serial ports were disabled and still allowed access via TCP connection.

- **Fixed IR playback** – device drivers with sub-functions were not operating correctly.

FIRMWARE RELEASE HISTORY (Cont'd)

Released Version: 1.06

Affects: **Engineering Revision:** prior to E14637
Firmware Revision: 1.04 or earlier
Date(s): Units shipped prior to October 2004

The following is a list of changes and fixes in this release.

- **Clock Fixes/Changes**
  - Enhanced Daylight Saving Time – Now supports DST for US, EU and Brazil.
  - Fixed clock time calculation that would cause a minute transition to be missed.
  - Check for valid year (00-99) in CT command via telnet
- **Fixed DHCP request processing** – If an IP Link unit requested a DHCP address it could mistakenly accept the return message from another requestor and cause duplicate IP addresses to appear on the network.
- **Fixed event processing** – With a USER level password in the box programs such as GlobalViewer™ Web would not allow control of the configured devices. Now allows USER (CU) level access to the following commands: xE, RS, SF
- **Fixed RS command** - Was not using the CE parameters when priority parameter was set.
- **Fixed Direct Access** – Data would be lost if the RS-232 buffer filled up
- **Enhanced port re-mapping** – When a port is re-mapped, all connections are broken for the port that is changed. Additional checking to see if ports overlap is implemented. (affected commands MT, MH, and MD)
- **Changed error response** – If trying to set the IP address while DHCP is on, command returns E14 (previously E24).
- **Changed password read response** – Administrator (CA) and User (CU) read requests no longer return the password stored but return "*****" instead for security purposes.
- **Added file system structure** – New commands (CJ and LF) implemented to support sub-directories and listing of files
- **Added password validation** – Check for administrator password during an HTTP post request.
- **Changed broadcast** – IP Link no longer broadcasts by default (time set to 0).
- **Enhanced verbose mode** – Added option 2 and 3 to allow fully qualified responses without and with verbose turned on respectively.
- **Increased URL message size** – Maximum URL length is now 500 bytes.
- **Updated default web pages**
  - Enhanced File Management UI to support file directories.
  - Allow user to add a directory, delete a directory, and navigate directory structure.
  - Fixed bug on File Management page where numeric file names were not being sorted correctly.

FIRMWARE RELEASE HISTORY (Cont'd)

Released Version: 1.04
Affects: **Engineering Revision:** prior to E13903
Firmware Revision: 1.03 or earlier
Date(s): Units shipped prior to February 2004

The following is a list of changes and fixes in this release.

- **Added support for IPL T IRL** – IP Link IR Leaner support.
- **Fixed CD command** – A status read of the CD command will now correctly indicate that a direct access is using the Com port by indicating the TCP port number that is connected.
- **Fixed RS command** – The command would use the default per character timing value rather than the specified one.
- **Fixed I/O reset**- After a factory reset was issued (Mode 5 or ZQQQ) the Flex I/O input thresholds were not re-initialized.
- **Fixed event processing**
  - Certain branch conditions would not jump to the correct location.
  - Initialization code would be processed more than once.
- **Fixed clock processing -** The Day of the week was not calculated correctly on a leap year when the clock was set between January 1st and March 1st. Daylight Saving Time was not being calculated properly under certain conditions.
- **Changed file upload** – When there is no longer space in the file system, additional incoming data is ignored (via HTTP) and the incomplete file is stored (previously deleted). When the same condition happens via RS-232 or Telnet a failed error response is returned.
- **Enhanced commands** - Added to CD and CE: length and delimiter processing for incoming data stream. Added to CE: Priority flag that allows CE to override the RS commands parameters in event processing for uni-directional driver support.
- **Enhanced broadcast responses** – UDP responses now use the senders IP and MAC address to reply to requests.
- **Updated default web pages**
  - UI changes to the File Management page.
    - Remove 'paging' functionality. Display files on one page.
    - Added feature (dropdown box) to allow user to select 'All' files, or only files of a certain file type (HTML, XML, EIR, GIF, etc.).
  - Added support for IPL T PCS4 and IPL T IRL.
  - Enhanced the Configuration and Port Settings pages, to display user defined Time Zone and Baud Rate.
  - Added IR 'File Name' to the IR Driver page.

FIRMWARE RELEASE HISTORY (Cont'd)

Released Version: 1.03

Affects: **Engineering Revision:** Initial release of IPL T SFI244
Firmware Revision: N/A.
Date(s): Initial release for IPL T SFI244 only (December 2003)

The following is a list of changes and fixes in this release. This version is not supported on other IPL T models.

- **Added support for IPL T SFI244**

- **Fixed verbose mode** – HTML file serving would cause the file to be incorrect if it contained SIS write commands.

- **Enhanced parity options** – Added Mark and Space to parity options.

- **Changed event startup** – Events no longer start after the clock is updated if they weren't previously running.

- **Added IR sub-function capability** – Alternating IR code support (odd/even)

- **Additional firmware upload capability** – Firmware can now be loaded into the unit via Web, Telnet or RS-232.

- **Updated default web pages**

    - Do not display passwords. Display '****' if password is present.
    - Added pages to display IR Drivers and view commands contained within the IR Driver file. (IPL T SFI244).
    - Enhanced Email Page to display and allow editing of all 64 email addresses. Used to display only 8 addresses.
    - Sort and display files on File Management page by file type.

FIRMWARE RELEASE HISTORY (Cont'd)

Released Version: 1.02

Affects: **Engineering Revision:** prior to E13743
Firmware Revision: 1.01 or earlier
Date(s): Units shipped prior to November 2003

The following is a list of changes and fixes in this release.

- **Fixed the RS command from Telnet** – The connection would close if the Length or Delimiter parameter was used.
- **Fixed relay command on CR48** – When used with a pulse time, the command always used the default value.
- **Changed event startup** – Events no longer start after a file is deleted from the unit.
- **Added URL password checking** – Commands in the query string were not checked for password security access.
- **Enhanced script processing -** Increased total number of script lines that could be run (100,000)
- **Prohibit IP connections except of valid ports** - Only Telnet, HTTP and Direct Access are valid connections.
- **Save global settings** – Global settings are now saved immediately upon change of IP address, subnet mask, or gateway.

FIRMWARE RELEASE HISTORY (Cont'd)

Released Version: 1.01
Affects: **Engineering Revision:** prior to E13691
Firmware Revision: 1.00
Date(s): Units shipped prior to October 2003

The following is a list of changes and fixes in this release.

- **Fixed Direct Connect feature** – The connection would not always establish correctly under certain conditions.
- **Fixed software handshaking -** Software handshaking was not working.
- **Fixed file upload –** Would not work via RS-232 or Tenet connection.
- **Fixed Event processing -** Events numbered above 40 would not run.
- **Updated default web pages** – Added more detailed descriptions.